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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,578	06/24/2005	Hiroshi Kanai	OHK-0008	6450

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EXAMINER

STIMPert, PHILIP EARL

ART UNIT	PAPER NUMBER
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3746

MAIL DATE	DELIVERY MODE
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01/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/540,578

Applicant(s)

KANAI ET AL.

Examiner

Philip Stimpert

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 12, 16 and 20-27 are objected to because of the following informalities:
lines 1-2 recite "a compressor in which a fluid is force-fed," or "carbon dioxide is force-fed." Force-feeding is not an accepted term in the art, therefore the examiner suggests replacing "force-fed" with "compressed" or some similar equivalent (this limitation will be interpreted as "compressed" in this office action). Further, claim 12 recites "having a raised portion rising so as to surround a sealed portion." It is unclear whether these limitations ("raised portion" and "sealed portion") refer to the gasket or the compressor, though the examiner believes they apply to the gasket. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claim 17 recites the limitation "said inclined surface" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. Claims 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (US 4,764,091) in view of Miyaoh (US 5,988,651).

5. Regarding claim 12, Ikeda et al. teach a compressor in which a fluid is compressed. Ikeda et al. further teach a gasket (13) disposed between a valve plate 4 and a rear cylinder block 5b. Ikeda et al. do not teach that the gasket (13) has a raised portion or inclined surface, or any of the remaining limitations of claim 12. Miyaoh is directed to a gasket. In particular, in Fig. 2, Miyaoh teaches a gasket having a raised portion (A10) surrounding a sealed portion (Hw) wherein the right end of the raised portion and a base surface (A10a) of the gasket are not set on a single plane, the raised portion includes a flat surface (A10) positioned at a height differing from the height of the base surface (A10a) and an inclined surface (roughly, A13) with a predetermined angle of inclination which links the flat surface (A10) with the base surface (A10a) and an outer (left) edge of the flat surface does not have a shape similar to the shape of an inner edge (as shown in Fig. 1). Miyaoh indicates that this structure provides a reliable, inexpensive gasket (col. 2, ln. 20-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use modify the gasket (13) of Ikeda et al. to include the gasket structure as taught by Miyaoh in order to take advantage of that structure's reliability and inexpensive manufacture.

✓ 6. Regarding claim 13, Ikeda et al. teach that the gasket (13) is disposed between a valve plate (4) and a rear cylinder block (5b, see col. 4, ln. 41). Further, Miyaoh teaches that the inner edge (right edge, in Fig. 2) of the flat surface is squared off, and thus not circular.

7. Regarding claim 14, according to the combination (see Fig. 5A and 7 of Ikeda et al.), the entire outer edge of the raised portion of the flat surface comes into contact with

an intake valve and only a specific portion of the inner edge would come into contact with the intake valve. One of ordinary skill in the art would appreciate that the entire outer edge must come into contact in order to provide sealing, and that the valve structure of Ikeda et al. would prevent the entire inner edge from coming into contact.

8. Regarding claim 15, the combination references would require that the specific portion correspond to a connecting base portion (bottom, in Fig. 5A) of a lead portion of the intake valve.

9. Regarding claim 16, Miyaoh teaches a gasket, which according to the combination is used in a compressor which compresses a fluid. According to Miyaoh, the gasket has a raised portion (A10) rising so as to surround a sealed portion (Hw), and according to the combination, the gasket is disposed between a valve plate (Ikeda et al., 4) and a cylinder head (5b, see col. 3, ln. 67). Miyaoh also teaches that the inner edge end of the raised portion (A10) and a base surface (A10a) are not positioned on a single plane. Further, in the combination, the gasket, and thereby the raised portion (A10) would be disposed so as to seal a high/low pressure barrier wall (5c) and an atmospheric pressure barrier wall (5b).

10. Regarding claim 17, according to the combination, an inclined surface (A13) of the gasket would come into contact with at least the high/low pressure barrier wall in order to seal it.

11. Regarding claims 18-19, Ikeda et al. teach that the gasket (13) includes retainer portions (15) which regulate operation of a discharge valve (12a, col. 5, ln. 6-14).

12. Claims 20-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. as applied to their respective parent claims above, and further in view of Murakami et al. (US 2001/0019698).

13. Regarding claims 20-27, neither Ikeda et al. nor Miyaoh teach the use of carbon dioxide in a compressor. Murakami et al. teach a swash plat compressor, and in particular teach that the substitution of carbon dioxide for other refrigerants, particularly chlorofluorocarbons is "promising," (§ 23) and provides advantageous thrust loading levels (§ 93). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use carbon dioxide as the refrigerant in order to take advantage of its thrust loading properties.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Stimpert whose telephone number is (571) 270-1890. The examiner can normally be reached on Mon-Fri 7:30AM-4:00PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PES

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29 Jan 08

DEVON C. HARRIS
PATENT EXAMINER

Devon Harris
1/29/08